

# PMP STATS

## PROBABLE MAXIMUM PRECIPITATION STUDY

The statewide study was conducted by Applied Weather Associates (AWA) under contract with the DWR. PMP is the maximum amount of precipitation that is meteorologically possible at a location at a given time of year, for a given duration. The updated PMP values help dam designers ensure that critical dams in the state are reviewed with a public safety-first mindset by leveraging standards necessary to evaluate performance under the most extreme rainfall the atmosphere may produce.



52 Storms Used In Analysis



100 Statewide 100-Year Snow Pack Data Used



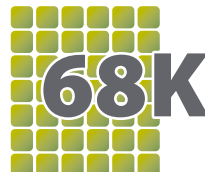
11 State, Federal, & Private Partners Participated



40 YEARS Of New Data



10 Previous National Oceanic & Atmospheric Administration (NOAA) Data Used 10 Contour Lines To Find A PMP Value



68K Unique Rainfall Depths At Each Of The 68,277 Grid Points In The New Study



4 Public Meetings To Gain Stakeholder Input



6 Organizations Comprised The Project's Review Board



110 Medium & High Hazard Dams In ND - Based On Potential Downstream Impacts

Updated Extreme Rainfall Data For Dam Design Supports Public Safety



### COLLABORATIVE EFFORT



### REVIEW BOARD

MEMBERS PARTICIPATED

Department of Water Resources

Applied Weather Associates

U.S. National Weather Service

U.S. Natural Resources Conservation Service

North Dakota's State Climatologist at NDSU

United States Army Corps of Engineers

The PMP information is publicly available online via the DWR's Dam Safety Program. A GIS tool along with guidelines for dam design professionals are also free of charge and easily accessible.

These innovative resources can be accessed at, [www.dwr.nd.gov/reg\\_approp/damsafety/](http://www.dwr.nd.gov/reg_approp/damsafety/).



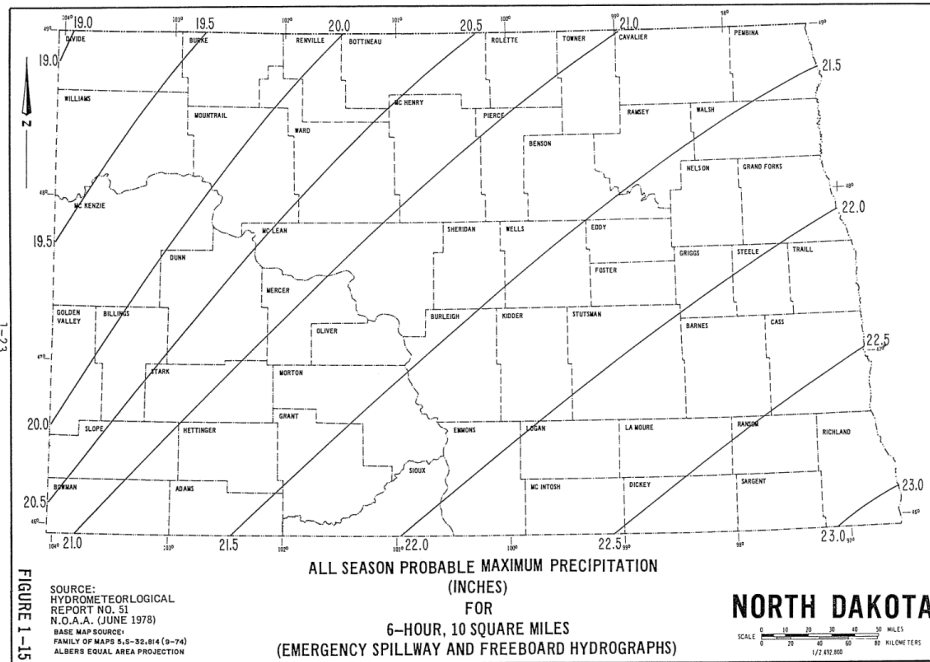
NORTH  
**Dakota**  
Be Legendary.

Water Resources

# PMP THEN & NOW

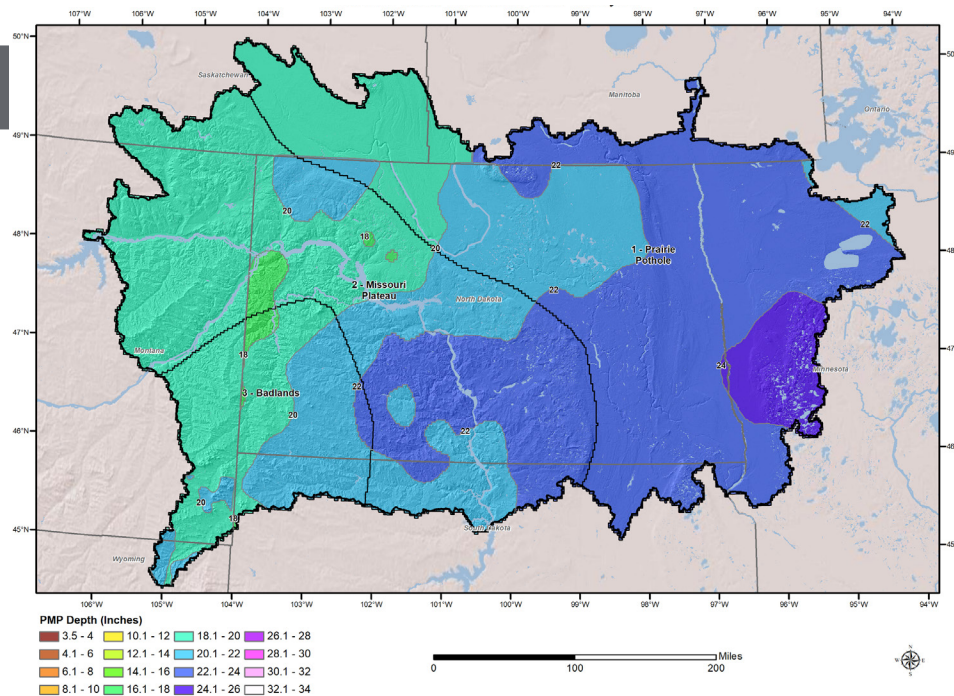
1978 | 6-Hour 10 mi<sup>2</sup>

THEN



6-Hour Local Storm Probable Maximum Precipitation (10 mi<sup>2</sup>)\*

NOW



\* This map represents the 6-hour local storm PMP which is derived from 68,277 unique data points compared to fewer than ten data points contained in the 1978 map.